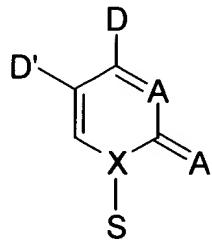


Amendments to the Claims:

Please amend the claims as shown in the Claims Listing, which replaces all previous Claims Listings.

Claim Listing:

1. (Currently Amended) An immunostimulatory oligonucleotide compound, comprising an immunostimulatory dinucleotide of formula 5'-pyrimidine-purine-3', wherein the immunostimulatory oligonucleotide compound is at least 6 nucleotides in length, and wherein pyrimidine is a non-natural pyrimidine nucleoside selected from the group consisting of ~~5-hydroxycytosine~~, ~~5-hydroxymethylcytosine~~, ~~N4-alkylcytosine~~ ~~N4-ethylcytosine~~, aracytosine and 4-thiouracil and purine is a natural or non-natural purine nucleoside.
2. (Currently Amended) An immunostimulatory oligonucleotide compound, comprising an immunostimulatory dinucleotide of formula C*pG, wherein the immunostimulatory oligonucleotide compound is at least 6 nucleotides in length, and wherein C* is a cytidine analog selected from the group consisting of ~~5-hydroxycytosine~~, ~~5-hydroxymethylcytosine~~, ~~N4-alkylcytosine~~ ~~N4-ethylcytosine~~, aracytosine and 4-thiouracil, G is guanosine, 2'-deoxyguanosine, or a guanosine analog, and p is an internucleotide linkage selected from the group consisting of phosphodiester, phosphorothioate, and phosphorodithioate.
3. (Currently Amended) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside has the formula (I):



wherein D is a hydrogen bond donor, D' is selected from the group consisting of hydrogen, ~~hydrogen bond donor~~, hydrogen bond acceptor, hydrophilic group, hydrophobic group, electron donating group, A is a hydrogen bond acceptor or a hydrophilic group, X is carbon or nitrogen, and S is a pentose or hexose sugar ring, provided that the pyrimidine nucleoside of formula (I) is not cytidine or deoxycytidine.

4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside of formula (I) comprises a non-naturally occurring sugar moiety.
8. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 7, wherein the non-naturally occurring sugar moiety is arabinose and arabinose derivatives.
- 9-38. (Cancelled)
39. (Currently Amended) An immunostimulatory oligonucleotide compound, comprising an immunostimulatory dinucleotide of formula 5'-pyrimidine-purine-3', wherein the immunostimulatory oligonucleotide compound is at least 6 nucleotides in length, and wherein pyrimidine is 5-hydroxycytosine and the oligonucleotide further comprises a phosphorothioate internucleotide linkage.
40. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is 5-hydroxymethylcytosine

41. (Currently Amended) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is N4-alkylcytosine N4-ethylcytosine.
42. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is aracytosine
43. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is 4-thiouracil